

Topic of Study – Snow and Ice



Snow is sometimes a part of children's natural environment that they can experience first-hand. During a snowfall, children can see but not hear the snowflakes as they fall to the ground. However, they can hear sleet as it hits the windowpane. When snow melts and refreezes, it becomes icy and makes a crunching sound when we walk on it. Snow and ice feel cold and wet. Snow looks good to eat, but its taste is very bland. Cold weather foods such as soup and chili have a wonderful aroma. Children learn about snow, ice and cold weather through their senses.

Introduction

Teacher Note: Plan to include this Topic of Study to coincide with snowy and/or icy weather conditions in your area. If you do not have snow and ice, you may decide to adapt the activities to focus on cold weather conditions.

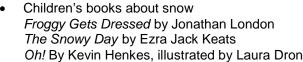


Here are three big ideas about snow and ice that you can help children explore:

- Snow and ice and cold weather can be experienced through the senses (sight, touch, sound, taste, smell)
- > Snow and ice and cold weather cause us to dress in different clothing
- Snow can be fun to play in

Big Ideas

- Pictures of snowy and icy scenes (laminate or cover with clear adhesive to preserve)
- Chart paper
- Felt or magnetic board
- Storytelling figures (felt or magnetic) for the book, The Snowy Day (A Story a Month, January, 2002)



- Oh! By Kevin Henkes, illustrated by Laura Dronzek
 Winter Weather Dramatic Play Prop Box: Collect scarves, mittens, gloves, winter vests, snow boots and place in a box labeled "Winter Weather"
- Mittens from different colors of construction paper. Make enough mittens for each child, plus a set of all colors for yourself. Have at least three mittens of the same color.
- Mittens and gloves (5 pairs of each)
- Collection of hats that represent different seasons and activities: sun visor, straw hat, canvas fishing hat, baseball cap, knit ski cap, fake fur hat, wool cap with ear muffs, detachable coat hood.



Materials to Collect and Make



Resources

- Check with your local library for the availability of children's books
- Children's books can be purchased online, from school supply catalogs or local bookstores
- Contact the Division of Child Care and Early Childhood Education for the following materials or locate at: www.arkansas.gov/childcare/storymonth.html:
 - ✓ A Story a Month January 2002 The Snowy Day (patterns for storytelling figures)

Introduction: Finding Out What Children Know about Snow and Ice

Benchmarks: 3.5 Understands that print conveys a message 5.8 Participates in group discussion

To introduce the topic of study "Snow and Ice," you need to find out what children already know about the topic. This allows you to build on children's experiences. It also helps create an interest in the topic. Here's how to begin:

- Gather the children in a group. Say, "For the next few days we're going to be learning about snow and ice."
- Write on chart paper, chalk board or marker board the words "Snow and Ice."
- Invite children to tell you things they already know about snow and ice. You
 may have to ask questions to stimulate their thinking; questions such as "How
 can you tell if it's snowing?" ""What does snow and ice feel like?" "What does
 snow look like?" "How do you feel when it snows?"
- Make a list of all of the things children know about snow and ice.
- Review the list with them and say, "You already know a lot of things about snow and ice and we'll find out even more."
- Keep the list until you have completed the topic of study.

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Introducing and Concluding the Topic

Conclusion: Finding out What Children Have Learned about Snow and Ice

- Gather the children in a group at the conclusion of the study about snow and ice.
- Write on chart paper or marker board "Things We Learned about Snow and Ice"
- Invite children to tell you some things they have learned about snow and ice.
 You may have to ask prompt questions such as "What happens when snow or ice melts?" "What are some things you might wear if you go out in the snow?" "How are snow and ice alike?" "How are snow and ice different?"
- Make a list of the things children learned about snow and ice.
- Read the first list you made with the children. Then say, "Here are some new things you found out about snow and ice" and read today's list with the children.

Teacher Note: Adapt the previous two activities to reflect the weather conditions in your area. For example, "Cold Weather" may be substituted for snow and ice.



Reading Books with Children

Benchmark: 3.1 Shows enjoyment of books and stories and discussion of them

Book #1: Froggy Gets Dressed by Jonathan London, illustrated by Frank Remkiewicz

First Reading of Froggy Gets Dressed

- Prepare to read the book, Froggy Gets Dressed
- Show the cover, give title, author and illustrator (Explain that author is the person who writes the book and illustrator is the person who draws the pictures.)
- Ask children to look at cover and predict what story is about.
- Read the story so all children can see the picture in the book.
- Follow up with questions such as "Why did Froggy's mother tell him to go back to sleep?" (Frogs are suppose to sleep all winter) "At the end of the story, why did Froggy go back to sleep?" (He was tired from putting on and taking off clothes)

Second Reading of Froggy Gets Dressed

- Show the cover, give title, author and illustrator.
- Read the story so all children can see the pictures in the book.
- Follow up the second reading by showing and rereading the pages where Froggy is putting on and taking off clothes.
- Involve children in pretending to put on and take off each item of clothing. For example, as you read, "So Froggy put on his socks – zoop!" children pretend to put on socks. "Pulled on his boots – zap!" and children pretend to pull on boots.
- Involve children in pretending to flop outside into the snow.

Third Reading of Froggy Gets Dressed

- Show the cover, give title, author and illustrator.
- Read the story so all children can see the pictures in the book.
- Follow up the third reading by involving the children in saying the name of the articles of clothing, in making the appropriate sounds, and in pretending to put on or take off each item. For example, read and point to the appropriate illustration: "So Froggy put on his ______" (pause) zoop!" "Froggy pulled on his ______"
- Repeat this activity with children if they seem to enjoy it.

Book #2: The Snowy Day by Ezra Jack Keats, author and illustrator

First Reading of The Snowy Day

- Prepare to read the book, The Snowy Day
- Show the cover, give title, author and illustrator (Explain that author is the person who writes the book)
- Ask children to look at cover and predict what story is about.
- Read the story so all children can see the pictures in the book.
- Follow up with questions such as: "How did Peter know that snow had fallen during the night?"
 - "Do you think Peter could have heard the snow falling?"
 - "How do you think Peter got his socks wet?"
- Allow children to discuss their experiences with snow.

Second Reading of The Snowy Day

- Show the cover, give title, author and illustrator.
- Read the story so all children can see the pictures in the book.
- Follow up with questions such as "How did Peter feel when he looked in his pocket for the snowball and his pocket was empty?"
 "What do you suppose happened to the snowball Peter had in his pocket?"
 When children say it melted, ask them, "Why do you think the snowball melted?"
- Allow children to share their experiences with snow.

Additional Benchmark: 3.23 Shows awareness of cause-effect relationships 5.9 Uses language to problem solve

Book #3: OH! by Kevin Henkes, illustrated by Laura Dronzek

First Reading of OH!

- Prepare to read the book, OH!!
- Show the cover, give the title, author and illustrator. (Explain that author is the
 person who writes the book and the illustrator is the person who draws the
 pictures)
- Ask children to look at cover and predict what story is about.
- Read the story so all children can see the pictures in the book.
- Follow up by turning the pages and inviting children to name and describe the animals on each page. For example, "quick gray squirrel" and "shy little rabbit."

Second Reading of OH!

- Show the cover, give title, author and illustrator.
- Read the story so all children can see the pictures in the book.
- Follow up the second reading by inviting children to act out and/or move in place like the characters in the book. Ask, "Can you skitter like the gray squirrel?" Allow the children to be creative as they "skitter" and "sneak."

Clifford's First Snow Day by Norman Bridwell



The Snowman by Raymond Briggs. A wordless picture book

Curious George in the Snow by H. A. Rey, illustrated by Margaret Rey

Katy and the Big Snow by Virginia Lee Burton

Snowmen at Night by Carolyn Buehner, illustrated by Mark Buehner

Additional Books

All You Need for a Snowman by Alice Schertle, illustrated by Barbara Lavallee

The Jacket I Wear in the Snow by Shirley Netzel, illustrated by Nancy Winslow Parker

Benchmark: 3.1 Shows enjoyment of books and stories and discussion of them

Storytelling Figures: The Snowy Day

- Make felt or magnetic story figures for the book, The Snowy Day.
- Use the figures and a felt or magnetic board to tell the story to the children.
- Tell the children that the story figures and board will be placed in the book area.
- Review with the children the correct way to use the story figures. For example:
 - ✓ Two children at a time use the figures to tell the story
 - ✓ Keep the figures on the board or in the storage container
- Spend time in the library/book area helping children use the story figures correctly.

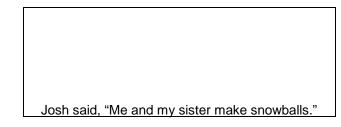


Language
Materials
and
Activities

Benchmarks: 5.8 Participates in group discussion
3.5 Understands that print conveys a message

Activity: Fun in the Snow (Large Group and Individual)

- Discuss with children at group time all the things they like to do when it snows.
- Tell the children that as they are playing in learning centers you will interview each one and ask them to help you write a book about snow.
- Involve children in helping you give the book a title such as Fun in the Snow. Write the title on a cover page.
- Interview each child individually and ask him/her what he enjoys doing most when it snows.
- Record their comments on a sheet of paper. Write exactly what the child says. For example, you might write this:



- Invite each child to illustrate his/her page.
- Use staples or yarn to put the pages together to make a book.
- Read the completed book with the children in group time.
- Place the book in the book/library area.

Benchmarks: 5.1 Demonstrates phonological awareness (hearing and recognizing the sounds of language

5.5 Participates in songs, finger plays, rhyming activities, and games

One Stormy Night (Poem)

Two little kittens, One stormy might Began to quarrel, And then to fight. One had a mouse, The other had none; And that's the way The guarrel begun.

"I'll have that mouse,"
Said the bigger cat.
"You'll have that mouse?
We'll see about that!"

"I will have that mouse,"
Said the eldest son.
"You shan't have that mouse,"
Said the little one.

The old woman seized Her sweeping broom, And swept both kittens Right out of the room.

The ground was covered With frost and snow, And the two little kittens Had nowhere to go.

They lay and shivered
On the mat at the door,
While the old woman
Was sweeping the floor.

And then they crept in
As quiet as mice,
All wet with the snow,
And as cold as ice.

And found it much better
That stormy might,
To lie by the fire,
Than to quarrel and fight.

Traditional

Teacher Note: Read the poem, "One Stormy Night," with expression and body language. For example, use a deep voice when speaking for the bigger cat and a high voice when speaking for the little cat. Pretend to shiver when you read, "They lay and shivered."

Second Reading of "One Stormy Night"

- Read the poem again and invite children to help you by filling in the rhyming words. For example, read, "Two little kittens, One stormy night, Began to quarrel, And then to ______(fight)." Help children recall rhyming words.
- Reread the poem at a later time if children seem to enjoy it.

The Robin (Nursery Rhyme)

The north wind doth blow, And we shall have snow, And what will poor robin do then, Poor thing!

He'll sit in a barn, And keep himself warm, And hide his head under his wing, Poor thing!

When the Snow Is on the Ground (Nursery Rhyme)

The little robin grieves
When the snow is on the ground,
For the trees have no leaves,
And no berries can be found.

For air is cold, the worms are hid, For robin here what can be done?

Let's strow (throw) some crumbs of bread, And then he'll live till snow is gone.

I'm a Little Snowman

(Sing to tune of "I'm a Little Teapot")

I'm a little snowman (Hold right hand about 12 inches above floor,

Short and fat then make large circle with both hands)

Here is my nose (Point to nose)

And here is my hat (Make large triangle above head with both hands)

When I see the warm sun (Make large circle above head with both hands)

Come out to play, I know that soon

I'll melt away (Move fingers downward to show melting)

The Snowman

Roll him, roll him, until he is big Roll him, roll him, until he is fat as a pig He has two eyes and a hat on his head

He'll stand there all night While we go to bed.

(Roll snow into large ball)
(Make large circle with arms)
(Point to eyes. Place hat on head)

(Stand erect)

Winter Weather

Let's put on our mittens (Put on mittens) And button our coat. (Button coat)

Wrap a scarf snugly (Throw scarf around neck with right hand and pull down other end with left hand)

Pull on our boots. Fasten the straps, And tie on tightly Our warm winter caps.

(Pull on boots with both hands) (Fasten straps with fingers) (Pull on cap with both hands and tie)

Then open the door... ...And out we go Into the soft

(Turn imaginary doorknob with right hand and pull open the door. Step through) (Hold out both hands to catch snow and

And feathery snow. look up)

Mitten Weather

Thumbs in the thumb place Fingers all together, This is the song we sing In mitten weather.

(Make motions of trying to get mitten on thumb, then push the mitten down on the fingers)

Doesn't matter whether They're made of wool or leather. Thumbs in the thumb place,

(Make same motions as above)

Fingers all together. This is the song we sing In mitten weather.

Walking in the Snow

(Sing to tune of London Bridges)

Let's go walking in the snow,

(Walk in place, as though walking in snow)

In the snow, in the snow. Let's go walking in the snow, all day long.

Let's go tiptoe in the snow, In the snow, in the snow,

(Tiptoe as though tiptoeing in snow)

Let's go tiptoe in the snow, all day long.

Let's go running in the snow,

In the snow, in the snow. Let's go running in the snow, all day long. (Run in place, as though trying to run in snow)

Let's go home and take a rest, take a rest, take a rest. Let's go home and take a rest, all night long.

(Pretend to be tired as you slowly walk home, then rest)

Benchmarks: 3.5 Understands that print conveys a message

- 3.9 Identifies some letters and makes some letter/sound matches
- 5.1 Demonstrates phonological awareness (hearing and recognizing the sounds of language)

Activity: Froggy's Clothing Makes Sounds (Small Group)

- Gather a small group of children, from three to five, for this activity.
- Review the book, Froggy Gets Dressed, stressing the sounds that each article of clothing makes as Froggy dresses and undresses.

• Make a chart with each group of children as follows:

Froggy's (Clothing Sounds
socks	zoop
boots	zup
hat	zat
scarf	zwit
mittens	zum
pants	zip
shirt	zut
coat	znap

- Say aloud the name of the article of clothing and the sound it makes as you write it.
- Call children's attention to the fact that all of the sound words start with the letter "z." Show them the letter (you might even underline each "z") and invite children to make the "z" sound with you.
- Review the chart with the children and help them say the article of clothing and the matching sound.
- Invite children to either draw pictures to illustrate the chart or to cut pictures from catalogs or magazines and glue to the chart.
- Hang the illustrated chart on the wall at child's eye level

Benchmarks: 3.10 Classifies objects by physical features such as shape or color

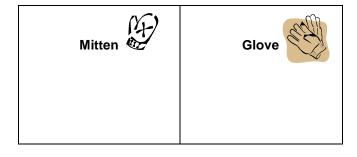
3.11 Classifies objects conceptually (things that go together)

Activity: Is It a Mitten or Is It a Glove? (Small Group Activity)

- Collect mittens and gloves (5 pair of each)
- Make a chart on a sheet of paper or cardstock as follows:



Science / Discovery and Math



- Allow children to explore the mittens and gloves and listen to their comments.
- Involve them in discussing how mittens and gloves are alike and how they are different. For example, you wear them both on your hands when it is cold (alike). Mittens have a place for the thumb and another for all fingers together, while gloves have a place for thumb and each finger (different).
- Read the chart with the children and invite them to put the gloves and mittens in the correct column.

Activity: Mitten Match

- Collect five pairs of mittens of different colors and/or patterns and place them in a basket.
- Invite children to find the mittens that match/that are alike and put them together.

Benchmarks: 3.21 Uses words to describe the characteristics of objects (scientific process: communicating)

3.22 Makes comparisons (scientific process: comparing)

3.23 Shows awareness of cause-effect relationships

Activity: What happens to ice?

- Label with permanent marker a small zipper-closing plastic bag with each child's name. Let each child put an ice cube in his/her bag.
- Involve the children in discussing how the ice feels. (hard, cold)
- Place the bags on the science/discovery table.
- Ask children to predict what will happen to the ice cubes in their bags.
- Discuss with the children the change that has taken place when the cubes have melted. Use the terms "solid" and "liquid" to describe the cubes and the water
- Place the bags in a freezer overnight.
- Allow the children to examine the bags again and discuss the changes that have taken place. (from liquid to solid and the ice is now a different shape than it was the previous day when it was an ice cube)

Activity: What happens to snow?

- Involve children in filling a plastic glass to the brim with snow.
- Bring the snow-filled glass inside.
- Ask the children to predict what they think will happen to the snow. Expect and accept a variety of answers. Some may say it will melt, it will be water or it will turn into ice.
- Place the snow-filled glass on the science/discovery table and suggest that children look at it from time to time.
- Ask the children why they think the snow is melting. Again accept all answers.
- Help the children realize that the indoor temperature is warmer than the outdoor temperature, thus the snow melts and becomes water.
- Ask children to predict what will happen when the water in the glass is put back outdoors. Expect and accept a variety of answers. Some may expect it to change back to snow, others may say it will change to ice.
- Bring the glass back into the room the next day and discuss the changes that took place overnight. (The water froze and became ice.)

Teacher Note: Plan this activity after a snow and when that night's temperature will remain below freezing.

Activity: Which hat do I wear? (Large or small group activity)

- Place an assortment of hats in a large box. Include hats that represent a
 variety of seasons and activities. Examples: sun visor, straw hat, canvas
 fishing hat, baseball cap, knit ski cap, fake fur hat, wool cap with ear flaps,
 detachable coat hood.
- Ask a child to remove one hat from the box and describe it.
- Ask children to decide when you would wear the hat. Is it the kind of hat you
 would wear when the weather is cold and snowy.

- Continue this activity, allowing different children a turn.
- Put all the winter hats together and involve the children in counting the number of hats that you would wear when the weather is cold and snowy.



Food/ Nutrition Experience

Benchmarks: 4.3 Tries new food before deciding whether he/she likes them 3.21 Uses words to describe the characteristics of objects

(scientific process: communicating)

- 3.22 Makes comparisons (scientific process: comparing)
- 3.23 Show awareness of cause/effect

Activity: Frozen Juice on a Stick

- Provide fruit juice, small paper cups (1 per child), nonstick spray and popsicle stick or tongue depressor
- Use permanent marker to write each child's name on his/her cup.
- Lightly spray inside of paper cups.
- Allow each child to fill his/her cup 3/4-full with juice.
- Discuss with children that juice is liquid. Ask what they think will happen to the juice when it is put in the freezer.
- Place cups in freezer for about an hour. Juice should be slushy.
- Remove cups from freezer, insert stick in juice (so the stick is in the middle of the cup.
- Return to freezer until frozen solid.
- Remove from freezer and peel off paper cup.
- Invite children to eat and enjoy juice on a stick.
- Discuss with children how juice has changed and what caused it to change. Use the terms "liquid" and "solid."

Teacher Note: Allow the children to do as much of these food experiences as possible.

Teacher Note: Teachers and children should always wash hands before participating in a food experience.



Movement/ Physical Education

Benchmarks: 2.5 Shows through movement what is felt and heard in various musical tempos and styles

4.9 Freely participates in gross motor activities

4.12 Shows balance and coordination

Activity: I Can Skate on Ice

- Show children pictures of ice skaters. Call attention to the ice skates the skaters are wearing.
- Invite children to put on and lace up their pretend ice skates.
- Play music such as a waltz and suggest that children glide across the room on their ice skates.

Activity: I Can Balance

- Involve children in walking on a low balance beam or a taped line on the floor or on a chalk line on the sidewalk outdoors.
- Allow only one child at a time to walk on the beam or the line.
- Have children start at one end of the beam or line.
- Tell children, "Walk across the balance beam/line just like you would walk across the floor." Say, "Step with one foot, now step with the other foot." Say, "Hold your arms straight out to your side."

- Hold the hand of a child who may need the support.
- Allow children many opportunities to practice walking across the board or line.
 Be aware that children will vary in their development of this skill.
- Vary the difficulty of the skill according to the development of the children. Some may be able to walk sideways or backward on the beam/line.

Activity: I Can Freeze

- Explain to children that you are going to play a game called "Freeze." You will
 play music as they move around the room. When the music stops, they are to
 "freeze" in one spot until the music starts again. Remind children to keep a
 safe distance from other children when they are moving.
- Play fast-paced music, stop it and say "freeze." After a few seconds, start the music again.
- Continue this activity until you feel that children have had enough of it.

Teacher Note: Stop the music and don't say "freeze."



Learning Centers

Benchmark: 2.10 Explores and manipulates art media

<u>Art</u>

- Allow children to play in shaving cream (snow) on a table top.
- Provide white chalk and black construction paper. Children may choose to create their own snow pictures
- Provide blunt-tipped scissors, washable or school glue and construction paper.
- Provide catalogs/magazines with pictures of winter clothes and allow children
 to cut out the pictures. Children may choose to glue the pictures to a sheet of
 construction paper and make a winter clothes collage.

Block Center

 Add a container of cotton balls and observe to see if children haul them in the trucks.

Library/Book Center

- Add books about snow
- Add pictures of snowy scenes and ice skaters, for example (laminate or cover pictures with self stick adhesive)
- Add felt or magnetic board and *The Snowy Day* story telling figures.
- Add book children have made about what they like to do when it snows.

Benchmarks: 2.1 Shows creativity and imagination in play with materials and props

- 2.2 Participates in dramatic play themes that become more involved and complex
- 2.3 Assumes various roles in dramatic play situations

Home Living/Dramatic Play

 Add the Winter Weather Dramatic Play Box to the home living area. Keep the box in the area throughout the study of the theme and longer if children remain interested in playing with the items in it.

Benchmark: 4.6 Coordinates eye and hand movements to complete tasks

Manipulatives

Place cotton balls, a container such as a cool whip tub, and tongs (salad

tongs, for example) in a small dish pan. Children will enjoy picking up the cotton balls with the tongs and placing them in the container.

Sand table or tub

- Hide animals in the sand (snow)
- Invite children to look for the animals in the snow

Water table or tub

 Add ice cubes to the water in the water table. Discuss with the children how the water feels.

Science/Discovery Center

Activity: Weather Duck

- Place the weather duck from the "Rain" topic of study in the center.
- Invite the children to visit the center and dress the duck for cold and snowy weather
- Join children as they play in the center and ask them questions such as, "It is snowing outside. What should Weather Duck wear?"

Refer to "What Happens to Snow?" and "What Happens to Ice?" Activities from the Science/Discovery and Math section

Quiet Corner

- Create a quiet corner in your classroom; a place where children can go to be alone and to get away from the stresses of group living.
- Place soft items in the quiet corner. Carpet on the floor, soft pillows, and soft and cuddly stuffed animals or dolls are examples.
- Discuss with children when they might want to go to the quiet corner. When
 they are angry and need to get away from the source of their anger? When
 they are sad and need to be alone? When the room gets too noisy and they
 need a quiet spot?
- Explain to children that the guiet corner is for one child at a time.

Teacher Note: Make sure this area can be supervised by the adults in the classroom at all times.



Snowball Wand

- Insert a 3/8" dowel stick (12" in length) into a 3" white Styrofoam ball.
- Use the snowball wand to gently touch a child on the shoulder to send to another activity.



Transition Activities

Mitten Match

- Make mittens from different colors of construction paper. Make enough
 mittens for each child, plus a set of all colors for yourself. Have at least three
 mittens the same color.
- Distribute one mitten to each child.
- Hold up a red mitten, for example, and say "Everyone who has a red mitten can: get your coat and come back to the circle to put on your coat and get help with the fasteners." Or choose a learning center."
- Continue this activity until each child has been directed to the next activity.

Who Is Wearing This?

- Say, "Who is wearing ...?" and describe an article of clothing by color, design
 or pattern, for example. "Who is wearing a red sweater with blue reindeer on
 it?"
 - Children will identify the child by name.
- Send the identified child to the next activity



Family Activities Send home a note to families stating that for the next few days, the children will be learning about snow and ice. Suggest some ways families can be involved in the topic of study.

- Collect and bring to the center pictures of snowy scenes from magazines and calendars or even family pictures.
- Take their children outdoors after a snow. Involve them in making snowballs and a snowman. Let them make angels in the snow.
- Take photos of their child playing in the snow and bring them to the center to share with the other children.
- Include the titles and authors of some of the children's books about snow.
 Suggest that they look for these books in the local library, check them out and read them with their child.
- Send home a copy of one or two of the finger plays or songs and ask families to sing the song or say the finger play with their child.